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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/137,198	08/20/1998	NORMAN J. BEAMISH	ROKWELL.039A	2615

20995 7590 07/09/2004

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EXAMINER

KUMAR, PANKAJ

ART UNIT	PAPER NUMBER
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2631

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DATE MAILED: 07/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/137,198

Applicant(s)

BEAMISH ET AL.

Examiner

Pankaj Kumar

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11-18 and 20-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9, 11-18 and 20-24 is/are allowed.
- 6) ☒ Claim(s) 25-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.
2. John King was asked if he wanted a telephone interview that he requested in his response. Since new art has been cited, he does not currently want the interview.

Response to Amendment

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 29 and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention since it is incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the relationship between a despreaders and a transmitter. Claims 29 and 30 claim a transmitter but also have a despreaders which is supposed to be part of a receiver.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2631

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 25, 26, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida 4815121 in view of Davis 5444770 and further in view of van Driest 6115411.

7. As per claim 25, Yoshida teaches detecting voice and switching from data to voice (Yoshida figs. 5C-2, 5C-3, 5D-2). Yoshida does not teach detecting data and switching from voice to data. Davis teaches detecting data and switching from voice to data (Davis figs. 3, 4, 5). Yoshida and Davis do not teach DSSS with voice and FHSS with data. Van Driest teaches DSSS and FHSS (Van Driest col. 2 lines 9-10: "(DSSS) or ... (FHSS)"). It would have been obvious to one skilled in the art at the time of the invention to modify Yoshida to teach detecting data and switching from voice to data. One would be motivated to do so if one is implementing a video teleconferencing system as taught in Davis. Also, it would have been obvious to one skilled in the art at the time of the invention to modify Yoshida to teach to use DSSS with voice and Davis to use FHSS with data. One would be motivated to do so since DSSS can transmit 100% of the time and can also handle sleep mode and thus power consumption well (voice needs real-time communication and thus needs to transmit 100% of the time even though there might be pauses in speech) while FHSS is less susceptible to interference. {DSSS transmits 100% of the time while FHSS does not since FHSS needs to synchronize the frequency before and after each hop (Halasz 6732163 col. 4 lines 37-46). Also DSSS handles sleep mode (i.e. when there is no talking during voice mode) better and thus power consumption better than FHSS (Haas 2002/0054619 paragraph 14)}.

8. As per claim 26, Yoshida in view of Davis and further in view of Van Driest teach the method of Claim 25 wherein processing the input signal as a direct sequence spread spectrum signal comprises generating a spreading code, mixing the input signal with the spreading code to produce a spread signal (applicant's background of the invention page 3 lines 16-22), and modulating the spread signal with an output of a frequency generator (Van Driest fig. 2: 216, 212, 214).

9. As per claim 28, Yoshida teaches a method of transmitting a signal comprising: detecting when an input signal is voice and transmitting (Yoshida figs. 5C-2, 5C-3, 5D-2). What Yoshida does not teach is in response thereto selectively activating a direct sequence spread spectrum transmitter so as to process said input signal as a direct sequence spread spectrum signal. What Van Driest teaches is DSSS (Van Driest col. 2 lines 9-10: "(DSSS) or ... (FHSS)"). It would have been obvious to one skilled in the art at the time of the invention to modify Davis to teach selectively activating a direct sequence spread spectrum transmitter so as to process said input signal as a direct sequence spread spectrum signal. One would be motivated to do so since DSSS is less susceptible to interference. What Yoshida also does not teach is detecting when the input signal is data. What Davis teaches is detecting when the input signal is data and transmitting (Davis figs. 3, 4, 5). It would have been obvious to one skilled in the art at the time of the invention to modify Yoshida to teach the teaching of Davis. One would be motivated to do so if one was implementing a video teleconferencing system such as in is Davis. What Yoshida also does not teach is in response thereto selectively activating said frequency hopping spread spectrum transmitter so as to transmit said input signal as a frequency hopping spread spectrum signal. What Van Driest teaches is FHSS (Van Driest col. 2 lines 9-10: "(DSSS) or ... (FHSS)").

It would have been obvious to one skilled in the art at the time of the invention to modify Yoshida with Van Driest. One would be motivated to do so since FHSS is less susceptible to interference.

10. Claims 27, 29, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida in view of Davis and further in view of van Driest and further in view of Sumner.

11. As per claim 27, Yoshida in view of Davis and further in view of Van Driest teach the method of Claim 25. They do not teach wherein processing the input signal as a frequency hopping spread spectrum signal comprises applying a frequency hopping sequence to a frequency generator, and modulating the input signal with an output of the frequency generator. Sumner teaches wherein processing the input signal as a frequency hopping spread spectrum signal comprises applying a frequency hopping sequence to a frequency generator (Sumner fig. 3: adjust powers of frequencies), and modulating the input signal with an output of the frequency generator (Sumner fig. 3: modulator). It would have been obvious to one skilled in the art at the time of the invention to modify Yoshida in view of Davis and further in view of Van Driest with Sumner. One would be motivated to do so in order to implement a FHSS system as taught in Sumner for the advantages of FHSS as taught in Sumner. FHSS advantages were also discussed above.

12. As per claim 29, Yoshida in view of Davis and further in view of Van Driest teach the method of Claim 28. What they do not teach is wherein activating the direct sequence spread spectrum transmitter comprises: activating a spreading code generator; deactivating a hopping sequence generator; and activating a despreader. What Sumner teaches is wherein activating the

Art Unit: 2631

direct sequence spread spectrum transmitter comprises: activating a spreading code generator (Sumner fig. 3: P1 high); deactivating a hopping sequence generator (Sumner fig. 3: P2 to PN low); and activating a despreader (Sumner fig. 4) (rejected also under 112). It would have been obvious to one skilled in the art at the time of the invention to modify Yoshida in view of Davis and further in view of Van Driest with Sumner. One would be motivated to have a DSSS system since it is less susceptible to interference, handles sleep mode and power consumption well, and transmits 100% of the time.

13. As per claim 30, Yoshida in view of Davis and further in view of Van Driest teach the method of Claim 28. What Yoshida in view of Davis and further in view of Van Driest do not teach is wherein activating the frequency hopping spread spectrum transmitter comprises: activating a hopping sequence generator; deactivating a spreading code generator; and deactivating a despreader. What Sumner teaches is wherein activating the frequency hopping spread spectrum transmitter comprises: activating a hopping sequence generator (Sumner fig. 3: P2 to PN high); deactivating a spreading code generator (Sumner fig. 3: P1 low); and deactivating a despreader (Sumner fig. 9: despreading not being used and hence deactivated in various tasks such as 606, 620, and others) (rejected also under 112). It would have been obvious to one skilled in the art at the time of the invention to modify Yoshida in view of Davis and further in view of Van Driest with Sumner. One would be motivated to do so in order to implement a FHSS system as taught in Sumner for the advantages of FHSS as taught in Sumner. FHSS advantages were also discussed above.

Allowable Subject Matter

14. Claims 1-9, 11-18, 20-24 are allowed.
15. The following is a statement of reasons for the indication of allowable subject matter:
 - a. As per claims 20-24, the art of record does not suggest the respective claim combinations together and nor would the respective claim combinations be obvious with the following: and a mode selection circuit coupled to the direct sequence spread spectrum transmission portion and to the frequency hopping spread spectrum transmission portion, wherein the mode selection circuit is configured to detect when the transceiver is transmitting a voice transmission and in response thereto to selectively activate the direct sequence spread spectrum portion and to deactivate the frequency hopping spread spectrum transmission portion, and detect when the transceiver is transmitting a data transmission and in response thereto to selectively activate the frequency hopping spread spectrum transmission portion and to deactivate the direct sequence spread spectrum transmitter portion

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
17. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

Art Unit: 2631

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pankaj Kumar whose telephone number is (703) 305-0194. The examiner can normally be reached on Mon, Tues, Wed and Thurs after 8AM to after 6:30PM.

19. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (703) 306-3034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

20. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PK

TEMESGHEN GHEBRETISSAE
PRIMARY EXAMINER
7/11/04